OECD - Activities for the past year

Agricultural Reform

Directorate for Food, Agriculture and Fisheries

The agriculture directorate is using a modified version of the GTAP model called GTAPEM to analyze the impact of agriculture and non-agriculture reform, with a particular focus on the effects of OECD agricultural policy on developing countries. This analysis is part of an overall project that analyses policy reform using a "top-down" approach integrating a variety of modeling techniques. Global and regional analysis is carried out using GTAPEM while, at the other extreme, household impacts are measured for a selected number of OECD and non-OECD countries using farm household or mathematical programming models.

GTAPEM, which was developed for the OECD by the LEI, incorporates:

- factor substitution between purchased farm input intermediates, and between the aggregate intermediates and farm-owned inputs
- agriculture and non-agriculture specific factors of production
- a land allocation system that distinguishes among a large number of different land types using a three level constant elasticity of transformation structure

GTAPEM is being further developed to align the representation of policy more closely with the way support measures are classified for the OECD's PSE. This effort includes an attempt to integrate estimates of agricultural trade protection as revealed by the market price support components of the PSE with corresponding estimates of trade protection based on tariff information.

OECD Environmental Outlook

Environment Directorate

(description of this item will follow separately)

Impact of Changes in Tariffs on Developing Countries' Government Revenue

Trade Directorate

(Results to be presented at the 8th Annual Conference on Global Economic Analysis)

First, this work discusses current patterns of tariff protection across economic sectors and regions. The structure of developing countries' tariff protection is further analyzed in the context of protective and fiscal goals of tariff policies. Next, the paper presents different formula approaches to tariff reductions and addresses their revenue properties. A discussion of tax reform policies that could accompany tariff reform and lessen potential revenue losses follows. In the empirical part, the paper presents results of simulations of tariff revenue and welfare effects using the linear and Swiss tariff reduction formulas for a sample of 24 developing countries. Two models are used in the simulations: a simple partial equilibrium model which employs tariff-line TRAINS data and the standard GTAP general equilibrium

model which employs a pre-release of the GTAP 6 database. Based on the simulation results, the paper offers a discussion of cross-country differences and provides sensitivity analysis by changing formula coefficients. A comparison of estimates from the two models and across formulas is also provided. Finally, the paper offers a simulation of the welfare effects of reducing tariffs and simultaneously replacing lost tariff revenues with revenues from consumption tax. This involves a change of closure of the standard GTAP model where the ratio of taxes to income is swapped with a consumption tax in order to generate a tax replacement scenario, whereby taxes remain a constant share of national income. The representation of consumption tax in the GTAP database and its implications for simulation results are discussed. The paper concludes with policy implications.

Trade preference erosion: potential economic impacts

Trade Directorate

This paper presents the new findings from the on-going work of the OECD project on trade preference erosion. Following a review of the recent literature, the paper develops two main types of analysis. First, a detailed statistical analysis is undertaken drawing on the trade preferences database developed by the Secretariat and covering the Quad countries and Australia. This includes a presentation of the structure of tariff regimes in these key developed countries and identification of countries and sectors that are most reliant on tariff preferences. The second analytical approach uses the standard GTAP model and version 6 of GTAP database to simulate trade liberalisation scenarios that would entail preference erosion. The bilateral protection data in GTAP database are analysed with a special focus on preferential access to Quad and Australia markets. Preferential margins are defined as differences between the product-level bilateral ad valorem measures of protection and the average of ad valorem measures of protection across all trade partners in a given product category. The CGE component of the study is implemented with a view to consider indirect impacts that are not evident from a simple review of reliance on preferences. Representation of inter-sectoral linkages permits accounting for the reality that while some producers in selected preference-receiving sectors may be affected negatively, the resources that are freed from that sector can be employed in other sectors that may gain better access to world markets or be simply more efficient. In addition, the CGE approach allows linking changes in market access conditions for one product category to developments in other sectors through goods and factors markets. Additionally, the effects of simultaneous liberalization in multiple destination markets can be assessed more adequately. This is important since the potential negative effects of preference erosion that might be observed in one destination market could well be outweighed by better access to other destination markets (combined with better allocation of domestic resources).

Impact of Services Barriers on Effective Rates of Protection (ERP) in Agriculture and Manufacturing

Trade Directorate

(Work in progress, preliminary results to be presented at the 8th Annual Conference on Global Economic Analysis)

This study seeks to determine how protection of services affects the effective protection of agricultural and manufacturing sectors using the most recent estimates of services barriers in telecommunication, banking, distribution, electricity, professional services, and air and maritime transport in selected developing and transition economies. The main objective is to

provide an illustration of the potential economy-wide costs of services barriers to downstream using industries.

The paper uses the ERP formula in the context of the input-output framework presented in Elbeheri and McDougal (1998)[1], where ERP is defined as the ratio of the difference between the assisted and unassisted value added over the unassisted value added. To compute the ERPs, a simulation of the model to eliminate the wedge between world and domestic prices is undertaken. The assisted values are taken from the pre-simulation database, while the unassisted values from the post-simulation database. However, several adjustments are carried out to analyse the differences in impacts of calculating the ERP without considering services compared to the services-inefficiencies-adjusted ERP. First, the services tax equivalents are introduced into the GTAP database as taxes on outputs, import and/or export taxes using the "Altertax" option, which makes it possible to change various tax rates in the model database. The updated database containing the services tax estimates forms the basis for the subsequent experiment that eliminates the wedge between world and domestic prices. For the calculation of the services inefficiencies adjusted ERP, the new unassisted values are taken from this post-simulation database, while the assisted values from the initial pre-simulation database are kept unchanged.

The results from the simulations reveal moderate differences between the two ERPs for agriculture and manufacturing. However, if account is taken of services barriers, the magnitude of the ERP falls in almost all sectors in all countries. For some agricultural and manufacturing sectors the ERP becomes negative suggesting that the protection of both non-services and services inputs results in the effective taxation of these industries.

The magnitude of the taxing effect of services on non-services sectors is lower than expected. It depends on the services intensity of each sector, as well as the levels and ways of incorporating services barriers into the database. Also, it is worth noting that barriers related to a substantial part of services inputs (that account in some cases for over 15% of total inputs in agriculture and 20% of total inputs in manufacturing) have not been included in the analysis given lack of such estimates for these other services sectors. On-going work is addressing these caveats. The final version of the paper will consider improved services tax equivalents and include the estimates for the other (uncovered) services sectors. Also, it is aimed to compute separate ERPs for exportable and importable varieties.

China's trade and growth: Impact on selected OECD countries and the Russian Federation

Trade Directorate

This ongoing project aims to quantify the sectoral output and price effects caused by both China's integration into global goods and services trade, and its economic growth; and the welfare implications of these changes on selected OECD countries and the Russian Federation. Given the investment-dominated profile of China's recent growth, the paper puts special emphasis on the adequate representation of foreign direct investment and policies affecting it. For this purpose, the Foreign Direct Investment and Trade Analysis Project (FTAP) model will be adapted in several ways. Firstly, the analysis will be based on a more disaggregated sectoral database that will permit a detailed analysis of both goods and services trade liberalisation. The GTAP 6 database will be employed in this analysis. Secondly, as opposed to the majority of existing studies, the liberalisation of services will be simulated according to China's actual commitments, rather than based on various assumptions. For that

[1] Elbehri, A. and R. McDougal (1998), "Data base summary: effective rates of protection", GTAP 4 Data Package Documentation, Chapter 5.

purpose, the analysis will employ the most recent methods for estimating services trade barriers that will incorporate methodological improvements related to the assessment of the restrictiveness of policies and their impact on prices. Finally, the interaction between goods and services liberalisation will be considered in the analysis of the welfare implications and their regional distribution.

Enhanced economic co-operation

Economics Department with contributions by Trade Directorate

The GTAP model and a pre-release of version 6 of GTAP database were employed as a supplementary methodology in the first phase of a project examining the potential benefits of enhanced economic co-operation between OECD countries via comprehensive reductions in barriers to foreign trade and investment as well as domestic restraints on competition. This project is led by the OECD Economics Department (with contributions by Trade Directorate). The analysis of the impact of reforms on trade and output is based primarily on earlier regression results obtained by the OECD Secretariat in its work on the determinants of economic growth and on the drivers of trade and FDI, supplemented by general equilibrium analysis using the Global Trade Analysis Project (GTAP) model.

Economy-wide Effects of Barriers to Trade in Services in Selected Developing Countries

Trade Directorate

This report examines whether and how the benefits of services trade reform in seven services sectors are passed on to other sectors in the economy. The seven sectors are air passenger transport, banking, distribution services, electricity generation, maritime transport, professional services (engineering) and telecommunications. To assess whether the transmission mechanisms are country-specific or more general, the analysis covers a range of countries with different levels of development (Brazil, Chile, Malaysia, Morocco, Russian Federation, Thailand, Zambia and the OECD countries as a group). In order to quantify the flow-on effects of services trade barriers, the direct first-round impact that these barriers may have on prices and costs is first identified. Qualitative information about regulatory restrictions is converted into a quantitative index, using a priori judgments about the relative restrictiveness of different barriers. Then, an econometric model is used to estimate the effect of the services trade restrictiveness index on some measure of economic performance (typically price, cost, price-cost margin, quantity or productivity), while controlling for all the other factors that might affect performance in that industry. The computable general equilibrium model used for the evaluation is essentially the same as FTAP. Direct effects are divided into two broad types: those that create a markup of price over cost ("rent-creating") and those that raise the real resource cost of doing business ("cost-escalating"). The econometric work that estimates direct costs provides some evidence for whether the trade restrictions in a particular sector are rent-creating or cost-escalating. The computable general equilibrium model allows each type of effect to be modeled differently. Rent-creating barriers are modeled using 'tax equivalent' shifters. The cost-escalating barriers are modeled using productivity shifters. The results are comparative static, showing the impact of trade reform. The model structure takes into account not only input-output linkages but also primary factor constraints. This project was implemented for the OECD by Phillipa Dee using a version of FTAP model incorporating services delivered via FDI that was developed by Dee and Hanslow (2001).

Other

Trade Directorate has plans for using GTAP in its future work on NTBs and trade facilitation. (no public details yet available)